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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,176	12/04/2001	Edward Benyukhis	CE08625I	2846

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EXAMINER
CHEN, ALAN S

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)
	10/006,176	BENYUKHIS ET AL.
	Examiner	Art Unit
	Alan S Chen	2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-14* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-14* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *04 December 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　　1. ☐ Certified copies of the priority documents have been received.

　　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement filed 04/26/2002 comply with 37 CFR 1.98(a)(1),

which requires a list of all patents, publications, or other information submitted for consideration

by the Office. It has been placed in the application file, but the information referred to therein

has not been considered.

Drawings

2.   The drawings are objected to because misspelling of the word non-volatile in Fig. 1,

element 105. A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings will not be

held in abeyance.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1,2,4,6-8,9,11,13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated

by Buckland et al. (hereafter Buckland).

In reference to Claims 1 and 8, Buckland discloses a method and system for improved

initialization of a high availability system that comprises a controller component (Fig. 6, element

104, 105, and 113) and a plurality of peripheral components (Fig. 6, element 108), the method

system comprising:

Applying power by a controller component (Fig. 6, element 105) to a first

peripheral component (Fig. 8, steps 5 and 6).

When initialization of the first peripheral component is received by controller

component (Fig. 6, elements 104 and 113) storing an identifier of the first peripheral

component (a step in how PCI works , stores ID of device in a record such as the ESCD

record, see www.howstuffworks.com->How PCI Works); applying power by the

controller component (Fig. 6, element 105) to a next peripheral component (Fig. 6,

element 108a).

When the first peripheral component has an error and locks up the PCI bus that

the controller component (Fig. 6, element 113) and PCI device share, restarting the

power-up sequence (Fig. 10, steps 4-9, 11 and 12); determining that an identifier of the

first peripheral component was not stored and skipping first peripheral component that

failed.

In reference to Claims 2 and 9, Buckland discloses the method and system of Claims 1

and 8, respectively, wherein restarting the power-up sequence comprises reinitializing the high

availability system (Fig. 10, element 11 and 12).

In reference to Claims 4 and 11, Buckland discloses the method and system of Claims 2

and 9, wherein storing comprises storing the identifier in a memory device whose contents

survive a reinitialization of the high availability system (ESCD file is stored on a memory device

accessible by the BIOS, see www.howstuffworks.com->How PCI Works).

In reference to Claims 6 and 13, Buckland discloses the method and system of Claims 1

and 8, respectively, wherein storing comprises storing a value in a location in a memory array

that corresponds to the first peripheral component (a step in how PCI works, stores ID of device

in a memory array, e.g., ESCD record, see www.howstuffworks.com->How PCI Works).

In reference to Claims 7 and 14, Buckland discloses the method and system of Claims 7

and 14, wherein clearing the contents of the location in the memory array corresponds to the first

peripheral component prior to the step of applying power to the first peripheral component, by

virtue of PCI protocol. Once the device has been disabled (Fig. 13, steps 20-22), the

configuration data is removed from the ESCD before power down (Fig. 13, step 23).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 3 and 10 are rejected under 35 USC 103(a) as being unpatentable over Buckland

in view of Richardson et al. (hereafter Richardson).

Buckland discloses the method and system of Claims 2 and 9 wherein the step of

restarting comprises reinitializing the high availability system and those control logic for

powering up and down a failed device (Fig. 6, element 105) includes a presence detection

mechanism. Buckland does not disclose expressly the method and system of claim 2 and 9

further comprising the step of both expiring by a watchdog timer and triggering the re-

initialization of the high availability system when the first peripheral component locks up the

bus.

Richardson discloses using a watchdog timer module for detecting a fault condition in a

controller and if detected, shuts down the controller.

Buckland and Richardson are analogous art because they are from the same problem

solving area in fault tolerance computing involving detecting and handling failed devices.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to use Richardson's watchdog timer principle in the presence detection mechanism of

stated by Buckland.

The suggestion/motivation for doing so would have been a simple way of detection of

failure by using a counter that periodically monitors the operation of a device (Column 25 and 26

of Richardson) and subsequently asserting a signal when there is a failure condition so re-

initialization can take place.

Therefore, it would have been obvious to combine Richardson with Buckland for the

benefit of using a watchdog timer for detecting device failure.

7.   Claims 5 and 12 are rejected under 35 USC 103(a) as being unpatentable over Buckland.

Buckland discloses the method and system of Claims 4 and 11 wherein the identifier is stored in

a memory device whose contents survive after re-initialization of the system.

Buckland does not disclose expressly the memory device comprises a non-volatile RAM

(NVRAM).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to

use NVRAM.

The suggestion/motivation for doing so would have been that NVRAM is designed specifically to hold memory so that is survives re-initialization or when a system is powered down or reset. Furthermore it is omnipresent in the industry for use expressly for that purpose.

Therefore, it would have been obvious to use NVRAM as the memory device.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to fault tolerant computing:

U.S. Pat. No. 5,321,830 to Nakamura et al.

U.S. Pat. No. 5,430,866 to Lawrence et al.

U.S. Pat. No. 5,438,675 to Fujioka

U.S. Pat. No. 5,450,576 to Kennedy

U.S. Pat. No. 6,202,160 B1 to Sheikh et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S Chen whose telephone number is 703-605-0708. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

KIM HUYNH
PRIMARY EXAMINER

8/28/03

asc
08/28/2003